

## CLAIMS

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I/we claim:

[c1] 1. A method in a computer system for logging data, the method comprising:

selecting a sequence of components for processing the data, each component having an input format and an output format such that the output format of a component is compatible with the input format of the next component in the sequence;  
invoking each of the components in sequence wherein output data of a component is input data for the next component in the sequence;  
and  
recording amount of data processed by each component.

[c2] 2. The method of claim 1 including recording type of data processed by each component.

[c3] 3. The method of claim 1 wherein a mapping from components to the recorded amount of data is used to determine a fee for the processing of the data.

[c4] 4. The method of claim 1 wherein the components are protocols and the amount of data is recorded at the protocol level.

[c5] 5. The method of claim 1 wherein the components are protocols with sessions and the amount of data is recorded at the session level.

[c6] 6. The method of claim 1 wherein the components are protocols with edges and the amount of data is recorded at the edge level.

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[c7] 7. The method of claim 1 wherein the amount of data processed by a path is recorded.

[c8] 8. The method of claim 1 including recording processing time of the data.

[c9] 9. The method of claim 1 wherein a source of the data is identifiable from the recorded data.

[c10] 10. The method of claim 1 wherein the recorded information is used to identify sources of advertisements.

[c11] 11. The method of claim 1 wherein a source of data is uniquely identifiable from a component that processes the data.

[c12] 12. The method of claim 1 including recording processing time of a component and allocating computer system resources based on the recorded processing time.

[c13] 13. A method in a computer system for billing for processing of data, the method comprising:  
identifying a sequence of components for processing the data based on a source format of the data and a target format of the data;  
logging amount of data processed by each component in the sequence;  
and  
determining a price for the processing based on the logged amount processed by a component.

[c14] 14. The method of claim 13 including logging of processing time of each component.

[c15] 15. The method of claim 13 wherein a component in the sequence uniquely identifies a source of the data.

[c16] 16. The method of claim 13 wherein the data is an advertisement.

[c17] 17. The method of claim 13 wherein the component is a protocol.

[c18] 18. The method of claim 13 wherein the logging is at either the session or path level.

[c19] 19. A method in a computer system for identifying a source of data, the method comprising:  
identifying a sequence of components for processing that data; and  
invoking each of the components in sequence wherein one component  
uniquely identifies the source of the data and wherein the amount of  
data associated with the identified source is logged.

[c20] 20. The method of claim 19 including billing based on the identified source.

[c21] 21. The method of claim 19 wherein the data is an advertisement provided by the identified source.

[c22] 22. The method of claim 19 including logging timing information.

[c23] 23. The method of claim 22 wherein computer resources are allocated to the components based on the logged timing information.

[c24] 24. The method of claim 23 wherein the computer resource is a central processing unit.

[c25] 25. The method of claim 23 wherein the computer resource is memory.

[c26] 26. A computer system for billing based on sources of data, comprising:  
a protocol for each source, each protocol for processing data in an input format;  
a logging module that logs information relating to the data processed by each protocol; and  
a billing system that bills based on the logged information for each source.

[c27] 27. The computer system of claim 26 wherein the protocols do not directly log the information.

[c28] 28. The computer system of claim 26 wherein each protocol is unaware of the logging.

[c29] 29. The computer system of claim 26 wherein the logging module logs at a session level.

[c30] 30. The computer system of claim 26 wherein the data is an advertisement.